



United States Department of the Interior  
Fish and Wildlife Service  
Ecological Services  
Carlsbad Fish and Wildlife Office  
2730 Loker Avenue, West  
Carlsbad, California 92008



February 12, 2002

Dear Permit Holder,

Subject: Quino Checkerspot Butterfly 2002 Survey Recommendations

We are fast approaching the time of year when the federally endangered Quino checkerspot butterfly (*Euphydryas editha quino*, Quino checkerspot) typically begins its flight season. The purpose of this letter is to inform you of our survey recommendations for 2002. Over the past two seasons, we have acquired new information regarding the biology and distribution of the Quino checkerspot. As a result, we revised the survey protocol and survey area map (enclosed), though most of the changes from the 2000 protocol are minor.

The most notable change to our protocol this year is that we will not be announcing the opening and closing of any "survey seasons." In the past, we have observed substantial geographic variation in the timing of the flight season among our monitored occupied reference sites, even those proximal to each other. Therefore, we believe it is more appropriate to provide permittees with information on habitat conditions and butterfly population phenology at each of our reference sites, and allow permittees to determine which monitored reference site is most representative of their survey site based on habitat characteristics and geographic proximity. We recommend site surveys be initiated at the beginning of the flight season that is documented at the most appropriate monitored reference site. You can access the latest monitoring information on our "Quino checkerspot hotline" at 760-602-4283.

Due to the unusually dry, warm weather in southern California during January and February 2002, habitat conditions at most monitored reference sites do not appear to be suitable for larval development. Therefore, we currently do not have any predictions of when or if Quino checkerspots will fly at most sites this season. The only exception to the general pattern is found at the Marron Valley reference site on the ridgetops between Otay and Tecate Mountains in San Diego County. Marron Valley appears to have received more rainfall in 2002 than other proximal reference sites, and numerous caterpillars have been recently observed. Based on the developmental state of the caterpillars sampled, Quino checkerspots could fly in Marron Valley as soon as the week of February 18. However, because environmental conditions at the Marron Valley site appear to be atypical compared to other occupied reference sites, that site may not be representative of most survey sites. For more information on the habitat characteristics of our monitored, occupied reference sites please call the hotline phone number.

Permittees should also note that all Quino checkerspot host plants found to occur in the survey areas should be reported, and three new primary host plant species have been recently

documented. The new species of primary host plant (plants on which adults deposit eggs) documented during the 2000 and 2001 seasons are *Plantago patagonica*, *Antirrhinum coulterianum*, and *Cordylanthus rigidus*. Any species of *Plantago* should be considered a possible host plant and reported.

We apologize for the inconvenience, but we are unable to provide any Internet-based services to the public at this time (e.g., on-line maps, email accounts). If you have any questions regarding the Quino checkerspot survey protocol, please contact Alison Anderson of my staff at 760-602-4287.

Sincerely,

Jim A. Bartel  
Field Supervisor